

**4.900 ELECTRICITY OUTAGE REPORTING****4.901 Definitions**

For purposes of this rule, the following definitions apply:

- (A) Outage: a zero-voltage event, exceeding five minutes, to one or more customers. All such events are included as Outages, regardless of underlying cause (except for the interruption of power to a customer in accordance with the terms of a special contract, approved by the Public Service Board, where such contract explicitly envisions that such interruptions may occur). Outage causes include, but are not limited to, company initiated Outages, transmission Outages, power supplier Outages, and Outages resulting from severe weather events.
- (B) Customers Out: the number of retail customer meters affected by an Outage net of voltage and current meters, station service meters, interchange meters, and any meters at a retail customer's premises beyond or in addition to the first meter at such customer's premises.
- (C) Customers Served: the number of retail customer meters, net of voltage and current meters, station service meters, interchange meters, and any meters at a retail customer's premises beyond or in addition to the first meter at such customer's premises for the system, district, or circuit being evaluated.
- (D) Outage Duration: the time between either the first customer call to report an Outage, or the first system data indication of an Outage, until the customer's service is returned.
- (E) Customer Hours Out: the summation of Customers Out multiplied by their respective Outage Durations.
- (F) System Average Interruption Frequency Index ("SAIFI"): 
$$\frac{\text{Customers Out}}{\text{Customers Served}}$$
SAIFI is a measure of the average number of times that the average customer experienced an Outage.
- (G) Customer Average Interruption Duration Index ("CAIDI"): 
$$\frac{\text{Customer Hours Out}}{\text{Customers Out}}$$
CAIDI is a measure of the average length of time, in hours, that was required to restore service to customers who experienced an Outage.
- (H) Non-Utility Power Supplier: any power supplier not holding a certificate of public good to provide retail distribution service.

**4.902 Operating Guidelines**

- (A) Each electric transmission and/or distribution utility shall use all reasonable means to avoid Outages. Losses of power to customers that are not Outages should be minimized in both frequency and duration, consistent with safety. Any significant degradation of power quality caused by an event listed in section 4.903(B)(2) of this Rule should be remedied in the shortest possible time, consistent with safety.

- (B) When service is interrupted to perform work on lines or equipment, such work shall be done at a time causing minimum inconvenience to customers consistent with the circumstances. Customers seriously affected by such Outage shall be notified in advance, if practicable.
- (C) The Department of Public Service and the Public Service Board shall be notified whenever evidence indicates the Outage may be of sufficient duration to create serious conditions in homes, farms, or industry.

#### **4.903 Recording and Reporting Requirements**

- (A) Each electric transmission and/or distribution utility shall keep a record of each Outage, including the date and time of interruption, the actual number of customers affected (to the extent practicable), the date and time of service restoration, the Outage Duration, the Customer Hours Out, identification of the circuit(s) affected, and, when known, the cause of such Outage (using the categories delineated in Section 4.903(B)(2)). This detailed information shall be used to compute the summaries in the reliability reports in Section 4.903(B), shall be maintained for at least three years following development, and shall be provided to the Public Service Board or the Department of Public Service in the electronic format prescribed by the Board upon request.
- (B) Each electric transmission and/or distribution utility shall develop reliability reports on a calendar-year basis beginning with calendar year 2001. Reports shall be filed with the Public Service Board and the Department of Public Service no later than 30 days after the end of each calendar year. The format of the reports shall be that prescribed by the Board. At a minimum, each report shall include:
  - (1) SAIFI and CAIDI reliability indices on a system-wide basis;
  - (2) A table showing the number of Outages and the total Customer Hours Out, system-wide, experienced during the reporting period due to each of the following categories of causes:
    - (a) *Trees* — Outages caused by the interaction of trees and tree branches (regardless of whether the tree originated inside or outside of the right-of-way) with the electric system, including Outages resulting from trees interacting with the electric system during severe weather. Tree-related Outages which result from operator error, accidents, or animals (e.g., beavers) should be listed under the respective cause-related category.
    - (b) *Weather* — Outages caused by wind, snow, lightning, ice, and flooding. Outages from weather events which cause trees to interact with the electrical system should be listed in the trees category.
    - (c) *Company Initiated Outage* — Outages caused by utility scheduled construction and maintenance.
    - (d) *Equipment Failure* — Outages caused by specific equipment failures such as transformer or arrester failures.
    - (e) *Operator Error* — Outages caused by utility or utility contractor error, including contract tree trimmer error.
    - (f) *Accidents* — Outages caused by accidents by other than utility employees or contractors, including the felling of trees into utility lines, as well as outages resulting from emergencies such as police or fire department

requests for shutdowns.

- (g) *Animals* — Outages caused by the interaction of animals such as birds, squirrels, and racoons with the electric system. Outages also caused by trees, in which the root cause is the action of an animal, should also be placed in this category.
  - (h) *Power Supplier* — Outages caused by the loss of power supply from another utility.
  - (i) *Non-Utility Power Supplier* — Outages caused by the loss of power supply from a non-utility provider.
  - (j) *Other* — Outages with known causes that fall outside of the categories listed above.
  - (k) *Unknown* — Outages with causes unknown.
- (3) An overall assessment of system reliability that addresses the areas where most Outages occur and the causes underlying most Outages. This assessment should be based on long-term reliability trends and consider the most recently compiled reliability data. Based on this assessment, the utility should describe, for both the long and short terms, appropriate and necessary activities, action plans, and implementation schedules for correcting any problems identified in the above assessment.
- (C) At its option, a utility's annual reliability report may include an explanation of Outage anomalies that significantly impacted the reliability indices and provide supplemental indices that net the affect of these anomalies. Such anomalies could include, though not necessarily be limited to, extremely severe and unusual weather events and region-wide blackouts.